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ABSTRACT

A study assessed the relative effectiveness of four types of follow-up techniques in increasing responses to mailed questionnaires requiring responses from multiple individuals. The respondents were college administrators. Copies of questionnaires designed to measure professional development were mailed to a random sample of 693 chief student affairs officers who were members of the National Association of School Personnel Administrators. The subjects were asked to complete and return the measure and forward a copy to their supervisor and to the student government president for completion and return. A total of 91 subjects responded to the initial mailing, and 113 subjects indicated an inability or unwillingness to participate in the study, leaving 344 subjects available for the study on follow-up approaches. Follow-up methods chosen included: (1) a postcard requesting a response; (2) an individually addressed letter typed on letterhead; (3) a photocopied "Dear Colleague" letter; and (4) telephone calls. In addition to requesting a response, each method included an offer to forward another set of survey materials. Results indicate that the degree of personalization and reduction of costs for the subjects' responses were the most salient factors in each method's success. (TJH)

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Four Methods of Following-up
Mailed Questionnaires

Mail questionnaire has been one of the most popular methods of survey data collection because of its low cost and relative ease of administration. The major drawback that it presents is the sometimes low rate of response. This is especially true in situations requiring multiple responses from each observational unit. The current study was designed to assess the relative effectiveness of four different types of follow-up techniques in increasing responses in just such a situation.

Goyder (1985) reports that the average 7.5% advantage in response rate of interviews over mail surveys has all but disappeared over time. He attributes much of the historical difference to more aggressive follow-up in interviews and suggests that low response rate in mail surveys can be meliorated especially through follow-up. In a review of literature, Linsky (1975) indicated factors that have been shown to have an impact upon response rates. These include mechanical and perceptual factors, broad motivational factors, and monetary rewards and other motivational factors.

Mechanical and perceptual factors include: precontact by letter, postcard or telephone; enclosure of a postcard to return to signify completion of an anonymous response; follow up; higher powered postage on outgoing and return envelopes; length of the questionnaire; printing of the questionnaires (color, size, and so on), and precoding of the questionnaire.

Broad motivational factors include: anonymity; cover letters; personalization; place and importance of the respondent; argument for social utility; appeal to help those conducting the study;

identification of sponsoring organization and titles of researchers; and the use of deadlines.

Direct motivational factors include: cash rewards; and the enclosure of prizes, premiums, or other non-cash rewards.

Personalization is one of the techniques most commonly believed to produce an increase in response. A number of studies have found this effect. Hochstim and Athenoeopoulos (1970) and Shackelton and Wild (1982) both found positive effects for personal contact between the researcher and the subject. In the former study costs were slightly more than double that of mail contact, and in the latter the effect was found only in interaction with a financial incentive. However, House, Gerber, and McMichael (1977) found use of certified mail to be superior to hand delivery of a follow-up by an employee's supervisor in a study of manufacturing plant workers.

Another aspect of personalization is a more personalized approach in the material mailed to the potential respondee. Linsky (1965) and Dillman and Frey (1974) found a positive effect for individually addressed letters. Martin, Duncan and Sawyer (1984) found significant effects of personalization only in interaction with prenotification. Snelling (1969) reported achieving a 92.62% response rate among graduates of four liberal arts colleges using a highly personalized approach. This included initial letters individually typed, incorporating nicknames or other individually meaningful references, and signed by a professor with whom the student had shared rapport. This was followed by an automatic reminder from the project director, and then an individually typed letter signed by the respective college president if no response was received. Anderson and Berdie (1975) got mixed results, with personalization techniques such as humorous post

cards and hand addressing. These were found successful with college students, but not with professors or administrators.

Other researchers have found no effect of personalization including Labrecque (1977), Worthen and Valcarce (1985), Woodward and McKelvie (1985), and Hawes, Crittenden and Crittenden, (1987). Still others such as Andreason (1970) have found lower response rates when personalization was used. These conflicting results have prompted authors such as Trice (1985) and Heberlein and Baumgartner (1978) to suggest influences such as conflict with the effects of anonymity and a connection with the perceived importance of the individual to the study as explanations.

Heberlein and Baumgartner (1978) identify perceived importance and decreased response cost (to the respondee) as factors affecting response. Linsky (1965) found importance of response to be an important factor in response rate, and Tedin and Hofstetter (1982) found the importance factor to be more salient than cost factors as an influence upon response rates. They found a certified letter effective in establishing importance.

Use of certified mail creates a sense of dissonance or guilt, so respondents attempt to reduce that by returning the questionnaires. Telephone calls are generally considered to be most effective.

Among those researchers studying the effects of telephone calls, Roscoe, Lang, and Sheth (1975) concluded that the telephone reminder was consistently more effective. Heberlein and Baumgartner (1978) in their metaanalysis found telephone calls to be effective, especially when used on second or third contacts. Finally, Dillman and Frey (1974) found no difference in response rates using telephone contacts, but did find an increase in response speed.

Among the most effective are the mechanical and perceptual factors including follow-up. Follow up actions can include letters, postcards, telephone calls, or certified mail which are used to encourage the respondents to return the questionnaires. In his review, Harvey (1987) cited use of follow-ups as an essential in increasing response rates. Heberlein and Baumgartner (1978) in an extensive metaanalysis indicated that the optimum number of follow-up contacts generally is three. They further went on to caution that through their regression analysis of response rate research, only 40% of the variance could be explained by the factors considered. This is consistent with an interpretation of a complex, interactive influence of variables upon response rate.

Miller and Smith (1983) found that a second mailing of the complete packet produced 70%-90% return rate increases. Futrell and Lamb (1981) found that both the number of follow-up contacts, and including a questionnaire with the follow-up increased response rates, with an overall response rate of 34.% with questionnaire compared to 20.3% without. Heberlein and Baumgartner (1981) in a composite of 13 studies found slight positive effects for the inclusion of a second questionnaire with a follow-up letter. They report that approximately 90% of the effect can be obtained with the follow-up letter alone, suggesting that the 10% incremental increase be weighed against the added cost.

Linsky (1975) reports 58% response by using letters and 53% with postcards. Von Reisen (1979) found that a follow-up consisting of a letter and a questionnaire was superior to a postcard follow-up or no follow-up, but found no significant difference between a postcard and no follow-up in a study of veterinarians.

A follow-up technique combined with incentives increases the rate of return. Pucel, et al. (1968), combined follow-up method with different kinds of incentives, and found no differences among four different incentives (pencil, colored questionnaire, packet of instant coffee, or preletter), but that the rate of response is related to the number of incentives.

Personalization is another factor thought to have an influence on the rate of mailed questionnaire response. Personalization is defined as the process of creating a belief on the part of the respondent that he/she is receiving the researcher's individual attention. Dillman (1972), in his experimental study, reported an increase of seven percentage points (from 85% to 92%) in personalized questionnaires. Dillman reviewed the study of Carpenter, which reported an increase of eight percentage points (from 64% to 72%) by using personalized procedures, such as individually typed names and prior contact by telephone. Other personalized procedures are: individually typed letters, handwritten letters, personal salutations, hand applied signatures, and telephone calls to each respondent. The first four incentives increase the rate of response, while the telephone call made prior to mailing the questionnaire increases the velocity of reply (Linsky, 1975; Miller and Smith, 1983; Dillman and Frey, 1974, Carpenter, 1972; & Dillman, 1983).

Carpenter (1972), used three treatments to measure the effect of personalization on the rate of response. In two of them he used non-personalization effects. The results obtained yielded no statistical difference among the three treatments.

Another personalization technique is that of explaining to the respondent the importance of the questionnaire, and how the respondent

was selected for the sample. Linsky (1975), by using this technique, obtained an increase of 12.7 percentage points (from 29.8 to 42.5 per cent). Linsky further reported that Martin in another study found this technique to be counterproductive. Martin's study revealed a decrease in response from 33% to 22%. The fact that Martin's respondents were recent graduates from high school, while Linsky's were members of the State Nursing Association may have accounted for the discrepancy in their results.

Findings are inconsistent regarding the effectiveness of many of the techniques recommended for increasing response rate. Complex interactions between a particular technique, the nature of the population, and the situation in which it is used appear to prevail. For that reason, the current study was designed to assess the relative effectiveness of different types of follow-up techniques in increasing responses in a study involving responses from multiple individuals - in this case - college administrators.

Procedures

Copies of questionnaires to measure professional development (Carpenter, 1979) and performance (Ryan, 1983) were mailed to a random sample of 693 Chief Student Affairs Officers (CSAO's) who were members of the National Association of Student Personnel Administrators. They were asked to complete and return the measure of professional development, and to forward a copy of the performance measure to their supervisor and to the student government president for completion and return. Stamped, self-addressed envelopes were included for the returns.

Since the analysis involved relationships of professional development variables, obtained from the CSAO's, with performance variables, obtained from their supervisor and student government president, it was necessary to the analysis to have all three responses in order to have a complete data set for each subject (CSAO). Therefore, to be considered a response, a full set of three instruments must have been received. Because of this, the definition of what constituted a response was more restrictive than in most studies. A greater than typical number of refusals was anticipated because of the multiple response situation and the fact that the CSAO's would be subjecting themselves to evaluation by their supervisor and a student, making the nature of the study sensitive. Subjects who chose not to participate were asked to indicate their nonparticipation using one of the enclosed return envelopes.

Cover letters for the initial mailings were all individually typed on university letterhead and addressed to the CSAO by name. Because of limited resources, initial mailings were done in two batches, one of 450 and the second of 243. Chi Square analysis showed no differences between the two batches in the pattern of complete responses to follow up (Chi Square = 3.08, 3 df, NS). Therefore, the two batches were combined for further analyses.

Four response categories of interest were possible: 1) a complete response (all three instruments returned), 2) a partial response (one or two of the three instruments returned), 3) a decline to participate (a written or telephoned refusal), and 4) a nonresponse (no instruments returned and no expression of intent not to respond).

Four weeks after the mailing, 91 complete sets of instruments had been returned, for only a 13.1% response rate. There were an additional

145 partial responses with at least one questionnaire returned, but with at least one questionnaire missing. A telephone follow-up was used to attempt to complete these partial responses, results of which are not a part of the current study. There were 113 (17.0%) who had indicated inability or unwillingness to participate in the study. Their desire was accommodated and no further attempt to elicit a response was made. There were, therefore, 344 subjects available for the study of the effectiveness of the various follow-up approaches. Table 1 summarizes the response data.

Table 1

Response Data

	Number	Percent
Number mailed	693	
A. Refusals (stated)	158	22.8%
B. Nonresponses	240	34.6%
C. Completed prior to follow-up	91	13.1%
D. Partial sets prior to follow-up	(145)	(20.9%)
E. Partial completed after follow-up (38.6% of 145)	56	8.1%
F. Completed responses to follow-up	31	4.5%
G. Total response (C + E + F)	178	25.7%

Nonrespondees were divided into four equal groups of 86 each by systematically assigning them to groups from the master list (organized in Zip Code order). Follow-up approaches were then assigned to the four

groups by lot. This procedure avoided possible geographical bias. The four methods used were (1) a postcard requesting that the nonrespondent respond with an offer to forward another set of materials if needed, (2) an individually addressed letter typed on letterhead requesting their response with an offer to forward another set of materials if needed, (3) a photocopied "Dear Colleague:" letter requesting their response with a complete set of materials enclosed, and (4) telephone calls to request their participation and offering to send additional copies of the questionnaires if needed.

Results

Table 2 below outlines the results of the study of follow-up procedures.

Table 2

Complete and Incomplete Responses after Follow-Up Contacts to Nonrespondees

Type of Contact	Complete Response	Incomplete Response	No Response
Telephone	14	10	62
Letter	6	2	78
Set of materials	8	9	69
Post Card	3	7	76

Note. Number for each type of contact was 86.

The value of Chi Square calculated for the above data of 16.011 (6 df, $p < .05$) indicates that there are differences in the frequencies of complete responses, partial responses and nonresponses to the different types of follow-up procedures. Since the primary concern was

with complete responses the partial response and nonresponse categories were collapsed and an analysis performed on that data. The value of Chi Square of 9.18 (3 df, $p < .05$) indicates that the different types of follow-up approach yield differential response rates, with the telephone follow-up eliciting the highest responses and the postcard the lowest.

Table 3

Time of Receipt of Responses

When Received	Number	Percent
Completed prior to follow-up	91	51.1%
Partial completed after follow-up (38.6% of 145)	56	31.5%
Completed responses to follow-up (9.0% of 344)	31	17.4%
Total response	178	100.0%

As shown in Table 3, almost half of the total number of complete data sets were completed after the follow-up. This strongly suggests that for survey research requiring responses from multiple individuals, a follow-up is critical. The data also suggests that greater success may be possible in soliciting the responses necessary to complete partial data sets than in obtaining a complete set of responses from those sets from which no response had been obtained.

The overall response rate appears low in comparison with current results of mailed surveys. However, in the context of a multiple response situation with sensitive content, could be considered quite good.

Results of the study support the importance of personalization and reduction of response cost effects. The telephone follow-up resulted in the highest response rate, followed by the mailing of a complete set of materials. This was followed by an individually typed reminder letter, with the postcard reminder distinctly inferior.

The telephone call was the most personalized of the approaches, and since an additional set of questionnaires was offered, was only marginally lower in reduction of response cost than the complete set of materials, which was not personalized but was the second most effective approach. The individually typed letter was personalized, but not so highly as the telephone contact, and high in response cost since questionnaires and return envelopes were not routinely provided and had to be requested if needed to respond. The postcard reminder was not personalized and high in response cost.

It would appear that the degree of personalization was the most salient factor, and that reduction in response cost was also involved. However, the current study was not designed to contrast these factors so a conclusive statement must await further research.

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